

RECEIVED
CENTRAL FAX CENTER

Practitioner's Docket No. MI22-1839

SEP 02 2004

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Farnworth et al, Warren M.

Application No.: 10/004,172

Group No.: 3729

Filed: 10/09/01

Examiner: A.D. Tugbang

For: Methods of Bonding Solder Balls to Bond Pads on a Substrate, and Bonding Frames

Commissioner for Patents
Washington, D.C. 20231

CERTIFICATION OF FACSIMILE TRANSMISSION

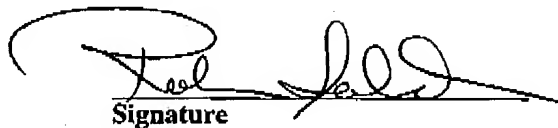
I hereby certify that the following papers are being facsimile transmitted to the Patent and Trademark Office at (703) 872-9306 on the date shown below:

Transmittal

Examiner Interview Summary of September 2, 2004

9/2/04
Date

Robin Saldivia


Signature

TOTAL PAGES - 4

(Certification of Facsimile Transmission-Fax2.wpd-page 1 of 1)

RECEIVED
CENTRAL FAX CENTERApplication Serial No. 10/004,172
Examiner Interview Summary of September 2, 2004

SEP 02 2004

MI22-1839

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/004,172
Filing Date October 9, 2001
Inventor Warren M. Farnworth et al.
Assignee Micron Technology, Inc.
Group Art Unit 3729
Examiner A.D. Tugbang
Attorney's Docket No. MI22-1839
Title: Methods of Bonding Solder Balls to Bond Pads on a Substrate, and Bonding
Frames

EXAMINER INTERVIEW SUMMARY OF SEPTEMBER 2, 2004P.O. Box 1450
Alexandria, VA 22313-1450

From: D. Brent Kenady
Tel. 509-624-4276; Fax 509-838-3424
Wells St. John P.S.
601 West First Avenue, Suite 1300
Spokane, WA 99201-3828

Applicant's representative held an interview with Examiner Tugbang on September 2, 2004. Applicant's representative would like to thank Examiner Tugbang for his time and attention to this matter.

Agreement was reached. The Examiner requested minor amendments to the claims to put the case in form for allowance. The following amendments were discussed and agreed upon to claims 7, 11 and 12:

Application Serial No. 10/004,172
Examiner Interview Summary of September 2, 2004

MI22-1839

7. (Currently amended) The method of bonding solder balls of claim 12, wherein said exposing comprises laser bonding the balls with ~~their associated~~ the individual bond pads by fixing the position of the frame and moving a laser beam relative to the frame from ball-to-ball.

11. (Currently amended) The method of bonding solder balls of claim 12, wherein:

said placing comprises placing individual solder balls within individual holes within the frame; and

said exposing of the balls comprises reflowing the solder balls while the balls are within their individual holes, and further comprising after said reflowing, removing the frame from around the reflowed balls.

12. (Currently amended) A method of bonding solder balls to bond pads on a substrate comprising:

placing at least portions of a plurality of solder balls within a frame and in registered alignment with individual bond pads over a substrate by dipping the substrate into a volume of solder balls; and

while the solder ball portions are within the frame, exposing the solder balls to bonding conditions effective to bond the solder balls with respective ones

Application Serial No. 10/004,172
Examiner Interview Summary of September 2, 2004

MI22-1839

of the individual bond pads, wherein said placing comprises placing said ball portions on fluxless bond pad surfaces.

The Examiner stated that he would make the amendments by an Examiner's Amendment and that he would positively state that these amendments do not change the scope of the claims.

Applicant would like to again thank Examiner Tugbang for his time and attention to this matter.

Respectfully submitted,

Dated: 9-2-04

By: 

D. Brent Kenady
Reg. No. 40,045